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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/294,298	04/19/99	HUGANIR	R 48235

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EXAMINER	
CLEMENS, K	
ART UNIT	**PAPER NUMBER**
1644	9

DATE MAILED: 10/04/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

PTO-90C (Rev. 2/95)

U.S. G.P.O. 1999 460-693

1- File Copy

Office Action Summary	Applicati n No.	Applicant(s)	
	09/294,298	HUGANIR ET AL.	
	Examin r	Art Unit	
	Karen Clemens	1644	

-- Th MAILING DATE of this communication appears on th cover sh et with th correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *1* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

1)☒ Responsive to communication(s) filed on *28 June 1999 and 10 August 2000* .

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32,34,35,44,45,48,54,56 and 62-69* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claims *1-32,34,35,44,45,48,54,56 and 62-69* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Pri rity under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a)☐ All b)☐ Some * c)☐ None of the CERTIFIED copies of the priority documents have been:

1.☐ received.

2.☐ received in Application No. (Series Code / Serial Number) _____ .

3.☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

15)☐ Notice of References Cited (PTO-892)
16)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
18)☐ Interview Summary (PTO-413) Paper No(s). _____ .
19)☐ Notice of Informal Patent Application (PTO-152)
20)☐ Other: .

DETAILED ACTION

Election/Restriction

1. The location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 1644, Group 1640, Technology Center 1600.

Please Note: In an effort to enhance communication with our customers and reduce processing time, Group 1640 is running a Fax Response Pilot for Written Restriction Requirements. A dedicated Fax machine is in place to receive your responses. The Fax number is 703-305-3704. A Fax cover sheet is attached to this Office Action for your convenience. We encourage your participation in this Pilot program. If you have any questions or suggestions please contact Paula Hutzell, Ph.D., Supervisory Patent Examiner at Paula.Hutzell@uspto.gov or 703-308-4310. Thank you in advance for allowing us to enhance our customer service. Please limit the use of this dedicated Fax number to responses to Written Restrictions.

2. Claims 1-32, 34-35, 44-45, 48, 54, 56, and 62-69 are pending.

3. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-21, 25 and 29-30 drawn to an isolated polynucleotide, a recombinant vector comprising the polynucleotide, a host cell comprising the recombinant vector, a method for producing the encoding polypeptide and a kit comprising the polynucleotide and oligonucleotide primers, classified in Class 536, Subclass 24.1-24.2, 24.31 and Class 435, Subclass 71.1, 252.3, 810.

II. Claims 22-24 and 29-30 drawn to a polypeptide and a kit comprising the polypeptide, classified in Class 530, Subclass 350 and Class 435, Subclass 810.

III. Claims 26-30 drawn to an antibody, and a kit comprising the antibody, classified in Class 530, Subclass 387.1, 388.22 and Class 435, Subclass 810.

IV. Claim 31, drawn to a method for modulating excitatory synapse function in a cell or group of cells using a polynucleotide, classified in Class 514, Subclass 44.

V. Claim 32, drawn to a method for modulating excitatory synapse function in a cell or group of cells using a polypeptide, classified in Class 514, Subclass 12.

VI. Claim 34, drawn to a method for treating a disorder associated with mammalian SYNGAP using a SYNGAP polynucleotide, classified in Class 514, Subclass 44.

VII. Claim 35, drawn to a method for treating a disorder associated with mammalian SYNGAP using a SYNGAP polypeptide, classified in Class 514, Subclass 12.

VIII. Claim 44, drawn to a method for identifying a compound useful in the diagnosis or treatment of a SYNGAP-related disorder, using cells comprising SYNGAP polypeptide, classified in Class 435, Subclass 7.2, 7.21.

IX. Claim 45, drawn to a method for detecting a compound capable of modulating a Ras-activated pathway, using the SYNGAP polypeptide, classified in Class 435, Subclass 7.2, 7.21.

X. Claim 48, drawn to a method for detecting a compound capable of modulating a phospholipid-activated pathway, using the SYNGAP polypeptide, classified in Class 435, Subclass 7.2, 7.21.

XI. Claim 54, drawn to a method for detecting a compound capable of modulating phospholipid-dependent calcium binding to the SYNGAP polypeptide C2 domain, classified in Class 435, Subclass 7.2.

XII. Claim 56, drawn to a method for detecting a test amino acid sequence able to bind the SYNGAP polypeptide, classified in Class 435, Subclass 7.2.

XIII. Claim 62, drawn to an amino acid sequence detected using a method for detecting the binding of a test amino acid sequence to SYNGAP, classified in Class 530, Subclass 300, 350.

XIV. Claims 63-66, drawn to a method for detecting excitatory synapses in a cell or cells, using an anti-SYNGAP antibody or antigen-binding fragment, classified in Class 436, Subclass 7.21.

XV. Claim 68, drawn to a library of polynucleotides, classified in Class 536, Subclass 23.1.

XVI. Claim 69, drawn to a library of polypeptides, classified in Class 530, Subclass 300, 350.

4. The inventions are distinct, each from the other because of the following reasons:

A) Groups I-III, are different products. They differ in their structure and modes of operation and have different effects. They are therefore patentably distinct each from the other.

B) Groups I and XV are different products. They have different compositions and physicochemical properties. They are therefore patentably distinct.

C) Groups II , XIII and XVI are different products. They have different compositions and physicochemical properties. They are therefore patentably distinct.

D) Groups IV-XII and XIV are different methods. They differ with respect to the components used, method steps employed and endpoints to achieve different goals. Therefore, they are patentably distinct each from the other.

E) Groups I, IV and VI are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (M.P.E.P. § 806.05(h)). In the instant case the product as claimed can be used in materially different processes such as in the methods of Groups IV or VI.

F) Groups II and V, VII-XII, are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (M.P.E.P. § 806.05(h)). In the instant case the product as claimed can be used in materially different processes such as such as the methods of Groups V or VII-XII.

G) Groups III and XIV are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed

can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (M.P.E.P. § 806.05(h)). In the instant case the product as claimed can be used in materially different processes such as in immunoaffinity purification procedures or immunodetection assays.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter and because a search of any of these distinct inventions would not be co-extensive with a search of the others, restriction for examination purposes as indicated is proper.

5. Applicant is further required under 35 U.S.C. 121:

(I) To Elect:

A) A ***specific*** polynucleotide such as that which encodes SYNGAP A, B or C if Group I is elected. These SYNGAP-encoding polynucleotides differ because they have different compositions and physicochemical properties. They are therefore patentably distinct.

B) A ***specific*** polypeptide such as that of SYNGAP A, B or C if Group II is elected. These SYNGAP polypeptides differ because they have different compositions and physicochemical properties. They are therefore patentably distinct.

C) A method for modulating excitatory snynapses in a cell or group of cells using a ***specific*** polynucleotide such as those that encode SYNGAP A, B or C if Group IV is elected. These methods using the different polynucleotides differ with respect to the components used and method steps employed. They are therefore patentably distinct.

D) A method for modulating excitatory snynapses in a cell or group of cells using a ***specific*** polypeptide such as SYNGAP A, B or C if Group V is elected. These methods using the different polypeptides differ with respect to the components used and method steps employed. They are therefore patentably distinct.

E) A method for treating a disorder associated with a ***specific*** SYNGAP, A, B or C, using a ***specific*** polynucleotide such as those that encode SYNGAP A, B or C if Group VI is elected. These methods

using the different polynucleotides differ with respect to the components used and method steps employed. They are therefore patentably distinct.

F) A method for treating a disorder associated with a ***specific*** SYNGAP, A, B or C, using a ***specific*** polypeptide such as SYNGAP A, B or C if Group VII is elected. These methods using the different polypeptides differ with respect to the components used and method steps employed. They are therefore patentably distinct.

G) A method for identifying a compound useful in the diagnosis or treatment of a ***specific*** SYNGAP-related disorder (A, B or C), using cells comprising a ***specific*** SYNGAP polypeptide such as SYNGAP, A, B or C, if Group VIII is elected. These methods using the different polypeptides differ with respect to the components used and method steps employed. They are therefore patentably distinct.

H) A method for detecting a compound capable of modulating a Ras-activated pathway, using a ***specific*** SYNGAP polypeptide, A, B or C, if Group IX is elected. These methods using the different polypeptides differ with respect to the components used and method steps employed. They are therefore patentably distinct.

I) A method for detecting a compound capable of modulating a phospholipid-activated pathway, using a ***specific*** SYNGAP polypeptide A, B or C, if Group X is elected. elected. These methods using the different polypeptides differ with respect to the components used and method steps employed. They are therefore patentably distinct.

J) A method for detecting a compound capable of modulating phospholipid-dependent calcium binding to a ***specific*** SYNGAP polypeptide, A, B or C, C2 domain, if Group XI is elected. These methods using the different polypeptides differ with respect to the components used and method steps employed. They are therefore patentably distinct.

K) A method for detecting an test amino acid sequence able to bind a ***specific*** SYNGAP polypeptide A, B or C if Group XII is elected. These methods using the different polypeptides differ with respect to the components used and method steps employed. They are therefore patentably distinct.

(II) To list all Claims readable thereon including those subsequently added. Currently Claims 1-15, 17-25, 29-32, 34-35, 44-45, 48, 54, 56, 62 and 67-69 are generic.

6. Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 C.F.R. 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 C.F.R. 1.48(b) and by the fee required under 37 C.F.R. 1.17(l).)

8. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen Clemens whose telephone number is (703) 308-8365. The examiner can normally be reached Monday through Friday from 8:00 am to 5:00 pm. A message may be left on the examiner's voice mail service. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached on (703) 308-3973. Any inquiry of a general nature or relating to the status

of this application should be directed to the Technology Center 1600 receptionist whose telephone number is (703) 308-0196.

Papers related to this application may be submitted to Technology Center 1600 by facsimile transmission. Papers should be faxed to Technology Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CM1 Fax Center telephone number is (703) 305-3014.

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Art Unit 1644
Technology Center 1600
October 2, 2000

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